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ABSTRACT

Theoreticians and empiricists have stressed the importance of organization in the learning process and, therefore, the importance of instructional strategies that help develop a child's ability to organize information. Theoreticians have also stressed the importance of the student's active participation in the learning process. The Directed Reading Thinking Activity (DRTA) strategy differs from the traditional Directed Reading Activity in that it is student-centered, stressing critical reading and student interest more than right or wrong answers. This does not mean, however, that the teacher's role is unimportant. Little empirical research has been done to compare the two methods, but it seems that teachers ask more inferring, interpreting, and evaluating questions when using the DRTA strategy, which in turn generates more hypothesizing, predicting, and theorizing from their students. The Specific Comprehension Strategy (SCS) also has received much support from both reading and psychological fields. While stressing students' active involvement in the reading-thinking process, SCS also provides an external structure by which children can critically examine what they hear, see, read, and think. Research on SCS indicates that it may be a viable alternative for developing reading comprehension. (JL)

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A Study of the Relationship Between the Theoretical and Empirical Research of The Directed Reading-Thinking Activity and The Specific Comprehension Strategy

By

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A COMPARATIVE STUDY OF READING STRATEGIES

Viewing "knowing" as "a process and not a product" (p. 72), Bruner (1966) states that a theory of instruction should teach a child how to participate in the "process of knowledge-getting" (p. 72) rather than teach for the goal of producing "little living libraries" (p. 72). He further suggests that the structure and organization of this body of knowledge is the key to comprehension of experience for every child. The organizational structure is as powerful as its ability "...for simplifying information, for generating new propositions and for increasing the manipulability of knowledge, (this) structure must always be related to the status and gifts of the learner..." (p. 41). Stauffer (1969) supports this learner-based organizational system for knowledge by advocating for an instructional setting in which the teacher acts only as a facilitator to guide the child's personal organization and processing of information. Piaget (1967) contends that an instructional strategy is meritorious on the bases of its ability to give the child an external means of structuring and organizing new experiences.

Smith (1975) elaborates upon these observances and asserts that it is the student, not the teacher, who must initiate the processes of comprehension and learning. Within the child exists the system for organizing information about the child's personal

world and for creating meaningfulness of new experiences within that world. The existance of cognitive structures, inherent in every learner, permits the child to "make sense" of the child's perception of the world. Each cognitive structure is comprised of the following three components: 1) a set of categories, 2) lists of distinctive features to specify membership of each category, and 3) a network of interrelationships among the categories (p. 121-122). When a student comprehends a situation, the student has "made sense" of the world in which the child lives and aligned new information into a meaningful whole within the child's existing cognitive structures; while a child, in the process of learning must "elaborate and modify" (p. 122) existing cognitive structures when the student fails to make sense of new experiences. Consequently, learning involves the reorganization and development of cognitive structures in order to make new experiences more predictable.

As a dynamic, cyclical organizational process, learning, evolving into comprehension and perception, "...implies a reorganization of that aspect of cognitive structure that is our summary of past experience, the summary we often call memory" (p. 35; Smith, 1975). When regarded as a dynamic, complex processing system, memory can be regarded as a process or "...selection, acquisition, retention, organization, retrieval, reconstruction and utilization of all our knowledge..." (p. 65). Thus, the "contents of memory, the objects of all these operations are indistinguishable from cognitive structure, while the operations themselves (cognitive skills) are performed on cognitive structure" (p. 65).

As a cognitive skill, memorization is often equated with learning (Smith, 1975). Smith provides evidence that organization and memorization are, indeed, the same process. In an empirical study cited by Smith, three groups of students were asked to inspect 52 word cards. One group was told that they would be asked to recall as many cards as they could; the second group was told to classify the cards, developing a personalized categorization system, and the third group was asked to categorize as well as recall the cards. All groups were asked to perform the same post-test measure. All were asked to recall as many cards as they could remember. Results of this experiment showed that both the second and third groups did equally as well on the post-test assessment measure and better than the first group on that measure. As the third group did not exceed the second group in its ability to recall the set of 52 cards, implications of the study suggest that the key to remembering information is the organization of information into meaningful units related to past experiences (Smith, 1975). Thus, the building of a system of organization to bring new experiences into a meaningful context in which the child can comprehend and learn would be a goal for teacher's instructional planning. Raths (1967) supports this assertion and suggests that in teaching for thinking, in teaching the processes related to the development of higher mental abilites in students, the teacher must necessarily develop a child's ability to organize information. In developing students who can do independent work, whose work is a reflection of the student's "...own curiosity,...his/(her) own questions, his/(her) own seeking..." (p. 15), Raths asserts that the teacher

must show the child how to collect and organize information in a variety of settings.

Consistent with this focusing upon the individual and the development of an individual's complex organizational systems for cognitive processing, mathemagentic theory and related empirical research have explored those behaviors and responses which elicit learning. Although much of this research has been related to the placement of the question (Frase, 1968; Rothkopf, 1965) and the source of the question (Frase and Schwartz, 1975), as a modifier of structure or learning set, the placement and source of the outline has been deemed worthy of further empirical research as it relates to the development of mathemagenic research and theory (Faw and Waller, 1976).

Ausubel (1968) suggests that the advanced organizer can be effectively used in two specific situations. When the ideas to be presented in a prose selection do not align themselves adequately with established ideas existing within the student's cognitive structures, the use of the advanced organizer in the form of a comparative outline can "bridge the gap between what the learner already knows and what he/(she) needs to know before he/(she) can learn the task at hand" (p. 148). And, the advanced organizer can be effectively used when the textual information is totally unfamiliar to the student. Here, Ausubel (1968) contends that the expository organizer can provide relevant, proximate subsumers which furnish appropriate ideational anchorage of unfamiliar notions to relevant, known ideas of the learner. Although research

exploring the effectiveness of the advanced organizer as an outlining strategy for organizing and presenting a summation of the material to be read by the student has proved inconclusive (Barnes and Clawson, 1975); and although the premises set forth in the development of schema theory do not align themselves well with the use of the advanced organizer as an instructional tool for organizing and interpreting textual information as a function of high-level schema orientations (Anderson, 1977), some documented research has shown that the placement of the outline does facilitate the constructive use of some specific critical reading skills in the interpretation of a reading passage (Glynn and Di Vesta, 1977). When 120 undergraduate educational psychology students were given an outline prior to the reading of a selection on "Minerals" and were required to write the outline from memory before reading the selection, subsequent recall of specific information from the test was 50% higher than recall of more general information from the text. Although those students who were presented with the outline prior to the reading of the selection were able to recall more specific information from text, the students' ability to infer relationships and make general statements extrapolated from the specificity of the information presented in the outline and the selection was not commensurate with their recall of factual information. As Glynn and Di Vesta state in their analysis of their productive recall data:

> the presence of an RSO (Retrieval Structural Outline) and/or a logical paragraph sequence influences the generation of productive responses. When neither organizational aid is present, the production of new relationships among ideas is inhibited. (p. 93).

Guthrie (1978) suggests that the placement of the outline after the reading selection allows for "constructive learning" (p. 65). Presentation of the teacher-constructed outline after the initial reading would allow for the activation of such higher-level thinking processes as inferencing and generalizing which generate from the child's interaction with the specific facts and concepts being presented in the reading selection. This type of organizational structure permits constructive relationships and connections to be established between the prior experiential base of the student and the concepts presented in the passage. Such an outline would also facilitate the subsequent reflection of the integration of new information and ideas into the exisitng cognitive structures of the student (Guthrie, 1978).

Other researchers and theorists have cited the need and facilitating effects that competence in using an outline structure has upon the development of critical reading skills. Shepherd (1973) contends that efficient and effective interpretation of textual information by the student can only occur "...when the student is able to organize the data into a structure which shows (the) logical interrelationships (of ideas)" (p. 103). Outlining is stated as one of the critical skills needed by students in recognizing the organizational structure imposed on the selection by the author as well as a critical skill needed by students to produce personal organizational structure upon the material.

Robinson (1967) suggests that outlining competence is a very basic reading skill that all students need to master in order to become proficient readers. Yet, the difficulty in acquiring

this pivotal skill is so pronounced that it needs to be a developmental objective to "...be worked (upon) at every grade level" (p. 12). Marksheffel (1966) would agree with Robinson's observation and would suggest that outlining be taught systematically throughout the grades as basic preparation "...to the higher-level skills of organizing information, facts, supporting details and ideas, for the purpose of summarizing, reaching conclusions and solving problems" (p. 113). He further suggest that the organization of learning through the use of a student-initiated outline requires the active participation of the learner in the comprehension process. By using the outline, the student can systematically "integrate and synthesize" new thoughts, ideas, concepts and facts with previous experiences in order to elaborate upon dynamic cognitive schematic structures to be used to increase the student's knowledge base.

In reporting the progress made by a group of tenth grade gifted students involved in writing research papers, Heavey (1961) suggested that gifted students needed additional help in using such critical reading skills as locating appropriate references, taking notes from resources and crediting the sources of information accurately as well as organizing notes into a functional outline format.

Rickards (1975-1976), commenting upon the conflicting research reports as to the effectiveness of using any type of advanced organizer upon the organization of textual information, suggests that further research into this question address a microcosm of mathemagenic behaviors and responses which may elicit more efficient student learning. Such issues as the appropriate length of an advanced organizer, the placement of the organizer within the

textual presentation, as well as the source of the outline all provide further research ideas warranting investigation (Rickards, 1975-1976; Faw and Waller, 1976). Faw and Waller (1976) further suggest that the effects of using an outline, as an instructional technique for organizing textual information be explored using clearly defined satellite populations such as the gifted student. Benefits of one instructional strategy for the general population may not be reaped with another specified population using the same instructional methodology. As Faw and Waller state (1976):

> It is of considerable importance in terms of actually implementing these innovations in real life to understand which subgroups of a population stand to profit most and least from the use of a given method, as well as the characteristics of any individuals for whom application of the technique might be detrimental (p. 713).

As the need for developing critical thinkers and readers has been established as a priority goal of instruction by the Educational Policies Commission (1961) and because critical reading skills do not appear automatically but must be taught (Painter, 1965), there is a need for formalized reading instruction to focus upon the development of a comprehension strategy which provides and external yet internalizing structure for the individual child which allows that child to organize, interpret and integrate new textual information into the child's increasingly complex thought processes (Gordon, 1965). ...s organizational structure and comprehension strategy, to be effective, must be applicable and adaptable to a total curriculum and not be taught in isolated segments or isolated presentations of content material (Smith, 1963; Taba, 1950; Gordon, 1965).

It must provide a structure by which a child can critically examine what is seen, heard, read and thought by that child. It must be adaptable to the child's personal style; and, therefore, differentiated to meet the special needs of the child as a learner. Consequently, as a person learns and comprehends experiences through the perceptions of the person's interactions with the environment, and as these perceptions are products of past experiences, present needs and purposes, it is evident that any systematic development of a comprehension strategy that facilitates critical reading must involve the total child in the thinking process (Beery, 1967). Suchman (1965) supports this need for children to become actively involved in their own learning and evaluation of the experiences relevant to concept formation and refinement. He defines the inquiry process as "learning that is initiated and controlled by the learner himself/(herself) as a means of expanding his/(her) own understanding" (p.290). Suchman contends that the more responsibility that children are given in the decision-making process which governs the environment in when they learn, the more meaning the experience will have for the learner and the more motivated that learner will be to participate in the task. Kagan (1965) further suggests that the use of a student-centered approach to learning allows the child a greater freedom to explore relationships between and among ideas and concepts; thus, removing the child from the "...submissive posture ordinarily maintained between the teacher and the child" (p. 560). Much more theoretical support has been given to instructional strategies which foster an environment

in which students must think, discover relationships and solve problems (Bruner, 1961; Gagne and Brown, 1961). Shapiro (1963) suggests that the facilitating role of the teacher in developing an environment which fosters critical thought and critical reading among students is of prime importance in the development of educational goals for the teaching of critical reading.

> The teacher introduces the children to the world of thought through the kinds of rules and rituals with which she surrounds the thinking process; the kinds of content she introduces, accepts, and rejects from the children; the kinds of approaches to problem solution she encourages and sustains; the amount of freedom she allows for independent and explanatory thinking; the speed with which she closes down inquiry; the respect she shows for fumbling, their confusion--all create for them an image of the world and a set of expectations about their own potency as learners and thinkers" (p. 101).

Thus, reading strategies which encourage active, student involvement from the initial purpose setting task to confirmation or rejection of hypotheses regarding the interpretation of textual information need be explored.

The Directed Reading Thinking Activity

As an outgrowth of the Directed Reading Activity (Betts, 1946) in which the following steps were conceptualized as appropriate methodology for reading instruction:

I. Developing readiness
   A. Insuring an adequate background of experience
   B. Developing working concepts
   C. Stimulating interest and identifying a general motive for reading
II. Guiding the first silent reading
III. Developing word recognition skills and comprehension
IV. Rereading
V. Following up the book reading (p. 491)

the Directed Reading-Thinking Activity incorporates many of the skills judged to be of critical importance in developing the competence of a critical reader (Gates, 1949; Stauffer, 1969). The underlying assumptions concerning the theoretical framework of the Directed Reading-Thinking Activity strategy contrasts sharply with the conventional, teacher-directed reading strategies used by a number of educators in working with a basal series (Betts, 1946):

1. Children can think.
2. Children can act purposefully.
3. Children can examine.
4. Children can use their experiences and knowledge.
5. Children can weigh facts and make inferences.
6. Children can make judgments.
7. Children can become emotionally involved.
8. Children do have interests.
9. Children can learn.
10. Children can make gereralizations; and
11. Children can understand (p. 19-20; Stauffer, 1969).

Petre (1971) has provided the researcher with his perceptions of contrasting elements between the Directed Reading Activity and the Directed Reading Thinking Activity.

DIFFERENCES BETWEEN THE DIRECTED READING ACTIVITY
AND
THE DIRECTED READING-THINKING ACTIVITY (Petre, 1971; p. 7)

Elements	DRTA	DRA
Preparation of or Purposes for Reading	Set by the group or by the individual	Set by the author.
Interaction	Encouraged for all participants in a group discussion.	Established with a teacher-pupil dialogue.
Word Recognition Skills	Taught during or after the reading step. Selected by each pupil because of his needs.	Taught prior to the reading step. Selected from the author's prepared list.
Comprehension Skills	Taught by pupil's rereading parts to accept, reject, or redefine their individually formulated purposes.	Taught by the teacher asking questions during silent or oral rereading steps.
Source of Authority	Material being read.	Teacher
Rate of Reading	Adjusted for the purposes for reading.	Not accounted for in the procedure
Re-Reading Orally	Used for reading specific parts to prove purposes.	Used to reread entire story with a prescribed set of questions.
Teacher's Role	Serves as a moderator and intellectual agitator.	Serves as moderator, questioner, and judge of pupils' answers.

A brief perusal of the preceding chart as well as the list of underlying assumptions rooting the DRTA strategy to a theoretical formulation accentuates the need for the student to be an active participant in the thinking process. Right and wrong answers to student-posed questions are not encouraged. Throughout a "reading lesson' students are asked to "read, predict, read, and prove " hypotheses statements that they have generated from and initial overview and subsequent reading of the selection (Stauffer, 1969; p. 156). As Stauffer (1969) comments on the purposes and focus of the strategy:

> Pupils are being taught to examine, to hypothesize, to find proof, to suspend judgment and to make decisions. They learn to do this in terms of their experience and knowledge (p. 57).

Students are asked to locate support for their opinions and predictions; students are asked to evaluate the information which they have sorted out and deemed relevant to their case and students have accepted the responsibility for providing sound proof for the decisions that they make regarding the interpretation of the reading selection. As such, the Directed Reading-Thinking Activity provides the essential environment from which critical readers may emerge. Stauffer states (p. 57):

> A Directed Reading-Thinking Activity in a group situation provides the conditions from which emerge scholars who understand what it means to think, to learn and to test.

Other researchers (Cramer, 1970; Hoskisson, 1973) have supported the modified DRA, the DRTA, as evidenced by such comments as:

> The DR-TA strategy is based on the assumption that pupils will be more motivated, interested and will understand a story better if they set their own purposes for reading and practice making predictions regarding possible outcomes of a story. This may be somewhat akin to... Smith's view that readers predict their way through a text (Hoskisson, p. 160).
>
> The ultimate goal of reading instruction is to develop independence so that the reader can, in the privacy of his own study, read materials in a critical and creative fashion. When students are encouraged, indeed required, to set logical purposes for reading... they soon discover that the ideas and sense of (purpose) of the author are frequently different from their own (p. 259; Cramer, 1970).

Yet, Dixon (1977) contends that the teacher has a more critical role in the success of a DRTA than some reseachers might like the educator to believe. Whereas most researchers have stated that the critical difference between the DRA and the DRTA is the role of the student in guiding the reading process from purpose setting to verification and/or revisal of the student's predictions, Dixon (1977) states that the teacher's facilitating role in choosing the appropriate stopping points within a selection is equally as crucial to the successful outcome of the DRTA as student's purpose-setting. In fact, the role of the teacher in choosing the appropriate stopping points makes the students within the reading group quite dependent upon teacher judgment to guide their thinking. Both convergent and divergent thinking possibilites are available during any given DRTA. Yet, the somewhat subjective, yet, experienced judgment of the teacher is used in choosing the type of thinking skills to be worked on at any point in the lesson. Dixon (1977) suggests that there be two criteria that

the teacher use in choosing the stop points successfully:

> 1) the thinking opportunities with which students need practice, and
> 2) the pattern to which the reading material lends itself (p. 167).

Thus, stop points in functional reading materials such as editorials and magazine advertisements may be quite differently set than stop points in other nonfiction and fiction writing; yet, all may elicit the same type of thinking opportunities, or quite different thinking opportunites based upon the facility and expertise with which the teacher makes the appropriate choices. And, the teaching of the skills involved in making those complicated choices to children who can use DRTA methodology to function independently of the teacher at some point in time as an end goal of reading instruction (Stauffer, 1969; Cramer, 1970), may be a complex addendum to a reading instructional unit. Although Dixon suggests that spacing the stop points further apart in a reading selection will elicit more convergent responses as the more information the reader is given the narrower the interpretation of the passage becomes, she qualifies this statement by saying that, "attempting to emphasize divergent thinking in a story which has only one <u>really</u> good prediction point may be a disaster" (p. 167). Thus, she again differentially weights the role of teacher judgment in guiding the process of DRTA.

Few empirical reseach studies have investigated the relationship between students' performance given the instructional methodologies of the Directed Reading Activity and the Directed Reading Thinking Activity (Petre, 1971, Davidson, 1970). Petre (1971) investigated

the possible relationships between the two strategies when he compared the quantity, quality and variety of pupil response patterns of fourth grade students being instructed in one of the two methodologies cited above. From a sample of 120 fourth grade students of varying abilities from both Elkton, Maryland, and Seaford, Delaware, twenty-four reading groups were formed randomly; after teacher judgment, based upon specific criteria, placed each child at one of three ability levels. Twelve groups were located in each community: six were instructed in the DRA strategy outlined in the manual of The New Basic Readers: Scott, Foresman and Company, 1965; six groups were instructed in the DR-TA strategy as outlined in the Winston Basic Reader Series: Holt, Rinehart and Winston, 1962. Each group contained five members: three girls and two boys. For the purposes of this study, twelve reading selections were selected from the series cited above; six from each specific series. During the twelve instructional lessons, covering a two week period, twelve lessons in each community were taped; two at, two above and two below for each instructional methodology. Tapes were analyzed by two trained judges with an average correlation between judges as being an .86. Tapes were analyzed for the variety, quantity, and quality of pupil response using the scale developed by the 1967 Ohio State University study entitled, "Critical Reading Ability of Elementary School Children". Of the 14 research hypotheses that Petre generated for his study, some of

the major conclusions he draws from his research findings are:

1. The quantity, quality and variety of pupil response differs significantly during a DR-TA and a DRA.
2. The DR-TA arrpears to allow more quantity, higher quality and wider variety in pupil responses ase a directed reading instructional procedure.
3. The prior instructional history of the students appears to have little affect on the quantity, quality and variety of pupil response since they will immediately improve in these three areas when taught by a DR-TA.
4. The quality of responses appears to be superior if the group has received prior instruction.
5. The DR-TA allows pupils to do more critical thinking as defined on the Quality of Pupil Response Scale in the Ohio Study.
6. The DR-TA may be used effectively at all levels of instruction, but appears to be especially effective as a method for the above grade level readers (p. 82-83).

These findings and conclusions tend to support the earlier work of Wolf, King and Huck (1968) which expounded upon Guszak's observational research on the types of questions that teachers ask of their students. Wolf, King and Huck found that specific verbal behavior from teachers did, indeed, elicit critical responses from children. In essence, this team of researchers, reporting verbal responses from a study involving 651 children in grades one through six from seven public school systems in Franklin County, Ohio, found the following teacher behaviors to elicit critical responses in children:

1. Teachers ask more questions than they make statements.
2. Teachers who received materials and instruction in teaching critical reading asked more Analyzing and Evaluating types of questions.
3. The quantity and variety of teachers' questions differed throughout the year.
4. The kinds of questions teachers ask influence the depth of pupils' thinking. In both the control and experimental groups, teachers' questions on Gathering Specific Facts

elicited Guessing and Literal responses whereas Analyzing and Evaluating questions produced the responses of Hypothesizing and Evaluating from pupils.

5. Children who receive instruction in critical reading give more Evaluating responses and fewer Literal, Memory, and Inferring responses than their counterparts who do not receive such instruction (p. 489-490).

Although Petre's findings support the previous research done at Ohio State University, one must qualify some of Petre's conclusions in light of some of the underlying assumptions on which the study was based. The presumptions that the population of children from which the sample was drawn received the corresponding instructional methodology dictated by the manual of the basal series in use in that particular school district may be an erroneous assumption. Children who had spent the first three and one-half years functioning in The New Basic Readers Series may possibly have received the DR-TA strategy from one of the child's reading instructional teachers as could one of the children in the Winston Basic Reading Series may have received instruction in the juxtaposed reading strategy, the DRA. Thus, qualification as to the four year longitudinal nature of the study and the non-significant finding that prior instructional methodology does not make a main effect difference in pupil response is, indeed, in order.

One may also question the theoretical position that Petre takes in analyzing the closed and open communication systems of the DRA and DRTA respectfully. During the structured DRA, Petre states that all communication flows through the teacher and in direct response to the teacher's questions. As such,

the "teacher becomes the central person with whom each participant must communicate or be given permission to communicate with a peer" (p. 12). In deferance to this system of communication, Petre states that the communication system of the DR-TA resembles an open system, where the teacher becomes an equally participating member of the group.

> each group member is free to communicate verbally with anyone else in the group by supporting, questioning, or rejecting ideas. The communication network is open to all members. The students interact through predictions and purpose setting. The teacher starts by signalling several members, moderates and stops the discussion with an equal position with all other group members in the communication network (p. 12).

Issue is taken with the supposition that the teacher is an equal member of the group. As the facilitator of the strategy, guiding pupil's thought through the selection of appropriate stop points (Dixon, 1977), the teacher clearly has a specialized, as well as controlling role, within the structure.

Finally, one may question the amount of instruction needed to elicit a significant methodological difference between the two strategies and the responses that the two strategies elicit from students when one analyzes the length of instruction in this experimental study. If the researcher is willing to assume that both original groups of students had, longitudinally, the length of instructional time in one given strategy, three and one half-years, then

one might question if any significant results, in favor of a "new" methodology could affect change over four instructional lessons. Thus, one again questions any results related to prior instructional set and the affect that set may have upon the longitudinal findings of the study.

In a similar study in which teachers' questions and students' responses were analyzed among a population of ninety fourth graders and nine teachers in nine elementary schools in a suburban school district near Detroit, Michigan, Davidson's results (1970) bear a clear resemblance to Petre's conclusions. Teachers ask significantly more inferring, interpreting, and evaluating questions when employing the DRTA strategy, which, in turn, generates more hypothesizing, predicting and theorizing by students engaged in the DRTA process than students exposed to the DRA reading instructional process.

As no one instructional methodology may be appropriate for all groups of children, and as the DRTA may be tied to the subjective expertise of the teacher facilitating the strategy as well as the success of any given strategy being appropriate for a specific type of curriculum material, it is well worth the researcher's time to explore possible other alternative strategies that enhance critical processing of material.

The Specific Comprehension Strategy

The Specific Comprehension Strategy (SCS) has received much support from both reading and psychological fields. While the strategy stresses students' active involvement in the reading-thinking process, it provides an external structure by which children can critically examine what they hear, see, read and think. As Stauffer has stated in arguing for a thinking strategy which promotes the total participation of the child in the reading process "A first step in the teaching of reading as a critical and creative process is to develop the involvement of the pupils in questioning, preferably their own" (p.477). As reading is a thinking process, questioning also reflects the personal processing of experiences and knowledge and arouses the curiosity of the reader in the reader's attempt to set the purpose for the reading task and give direction to it. Thus, the first step in developing a specific comprehension strategy for teaching reading comprehension as a personal, reflective act invests the reader's total self in the reading task (Wilson, 1974). The reader is the person who asks the questions, adjusts the reading rate to the specific purpose for which the reading is being done and identifies the important ideas of the selection. Throughout the implementation of SCS, the child is asked to employ problem-solving/critical reading skills by thinking, hypothesizing, finding evidence to support hypothesized statements, suspending personal judgment and making decisions as the reader acquires more information

which either supports and clarifies answers to the student's original set of questions and purposes for reading or alters those original ideas and purposes to be more consistent with the new information acquired from the reading of the text. The child is given the opportunity to share the ideas which were identified by the child as being important during the third step of the SCS. This permits group interaction and a non-threatening exchange of ideas among classmates as every idea is accepted by the teacher. The child is then given an opportunity to choose the idea which the child feels is most important from those ideas generated by the class and is permitted to change this idea from the original one which was contributed to the group. Then, either working separately or with a classmate who has identified the same idea as being most important, the child is asked to re-examine the reading selection in order to locate supporting evidence which substantiates the position which the child has taken. The final step in the specific comprehension strategy involves the student in the gathering of specific pieces of information within the passage which support the chosen important idea/s. These pieces of information, of which there should be at least two supporting statements are organized into an outline format which the student fills in and which provides the students with an external structuring system to be used by the student while seeking to mesh new ideas with the student's theory of the world in order to

"make sense" of the student's world (Smith, 1975).

By using a student-based reading strategy, by allowing the student to form personal questions and purposes for involving self in the reading process, by giving the child a specific external structure by which judgments can be made as to the validity of the student's responses, the child, through the use of the specific comprehension strategy, has the opportunity to participate in a more meaningful learning situation which will ultimately be more effective for the development of that student's comprehension abilities (Smith, 1975).

In a study conducted by Wilhoyte (1977) in Washington County, Maryland, 120 second and fourth graders who were reading at a minimum of a 2-1 reading level based upon the raw score of the Botel Word Opposites Test were randomly divided into an experimental and control group to determine, among other hypotheses, whether the implementation of the SCS strategy before testing in a recall and/or (recall+) locate situation improved performance in those two settings on the Diagnostic Reading Scales. A minimum of a 2-1 reading level was necessary for students in the study to exhibit as this level seemed to indicate from a prior study the level at which students could successfully operate using the SCS strategy.

Two forms of the Diagnostic Reading Scales were given to each member of the study, whether or not the student was in the control or experimental group. For the control group, students read the appropriate selections, were asked to recall information from the selections and then return to the selections to locate information previously missed in the recall session. This procedure was followed for both testing forms. In the experimental condition, students followed the same procedure as the control for the first testing form. But, prior to the administration of the second testing form, students in the experimental condition were asked to employ the SCS strategy under the guidance of the test administrator before responding to recall and (recall+) locate situations on the Diagnostic Reading Scales. Wilhoyte found no significant differences between the experimental and control groups on this dimension of her study. As the students in the experimental group had had no previous known experience with the Specific Comprehension Strategy, it may be a relevant research investigation for future investigators to replicate this project using an experimental group which has had a unit of time in using the instructional strategy of SCS prior to the testing situation. In this way, the organizational structure of the SCS strategy may be more a part of the

child's repretoire of reading strategies than was apparent in the study.

In a study which assessed the effectiveness of the SCS methodology in teaching main ideas and supporting detail to 133 third graders from two suburban public school systems within Maryland, Barnes (1976) found that students in the SCS group were able to answer the question, "What do you think is the main idea of this story?" significantly more often (p .05) than the control group on seven of the eleven levels of the Diagnostic Reading Scales (2a, 2c, 3a, 3c, 4a, 5a, 7a). Students who scored within the range of a raw score of 21 and 59 on the Botel Word Opposites Test were used for the study as this range of scores indicated that students were neither accelerated or handicapped in reading in relationship to their grade placement. Students in the SCS treatment group received nine instructional lessons employing the SCS strategy using a third grade basal. Students in the control group received nine teacher-structured lessons using the same basal stories. Although the SCS instructional set did not make a significant difference on the performance of children in a recall and/or (recall+) locate situation on the Diagnostic Reading Scales, yet, significantly increased the level of performance of subjects in reference to the "expected" (p. 75) number of main ideas identified by the SCS group in comparison to the control group, it would seem, as

Barnes suggest in her implications for teaching, that the specific comprehension strategy must be regarded as a viable alternative strategy for developing reading comprehension. Length of instructional unit may have had some effect upon the outcome of this research. Future research in the area of instructional effect upon comprehension may explore the effect of elongated instructional setting on similar research questions.

Implications

An aura of ambiguity continues to surround the mechanics for developing the most effective and efficient instructional structure to facilitate individual student's reading comprehension. While shifting one's perspective to teaching reading as a thinking process and not a product unto itself has gained much theoretical support from research on learning, one has yet to find a recipe that entices all children to the delights of comprehending while providing the same proportionate amount of ingredients to all who partake. Learning theory would contend that such a feast would be impossible for the best of gourmets to prepare.

Theory would suggest some basic ingredients which would lend themselves to the most diverse culinary dishes. A child-centered, individually focused curriculum which uses a child's strengths in developing competencies with critical reading skills acquisition while encouraging the active involvement of the child in the learning process may, indeed, be one of the essential ingredients to unlocking a successful learning experience

in the realm of reading and comprehension. Tying new concept development to a concrete experiential base for the child may also facilitate the personal comprehension process for every child.

Instructional settings which encourage the development of personalized organizational structure for children such as the personal outlining strategy employed in the SCS methodology may, indeed, foster the development and acquisition of critical reading skills in individual children. Although the outlining strategy has provided inconclusive results as a strategy for improving comprehension performance, much of the current research in outlining has evolved from the germanation of an outline by a third party who is, by virtue of role distinction, not directly involved in the intimate interaction of the reader and author in pursuit of a mutually accepted interpretation of textual material. Yet, the outline as a personal organizational strategy may provide a common, physical organizational base for all children while discriminating individually among children in a way in which each and every child may use the structure in organizing, modifying and elaborating upon the child's own "theory of the world".

As such, the Directed Reading-Thinking Activity, in providing a verbally abstract structure of "read, predict, read, prove", may facilitate the student-centered, personal processing structure which is recognized by theorists as being essential to learning. While most researchers would agree that

the DRTA strategy is preferable to such teacher-directed strategies as the DRA, some may feel that DRTA outcomes are constrained by the critical judgment of the teacher as "stop points" in textual material are selected by the teacher and, then, presented to the children. Analysis of this issue need be explored through future research. To the extent that the verbal abstractness of the organizational structure of the DRTA may inhibit anchorage of the process to an external, concrete base, future research is warranted.

To the extent that no one instructional method is appropriate for all children, and, therefore, a multiplicity of reading ideas and strategies are needed by reading teachers to fulfill the wide range of talents and strengths that are within their classrooms, future research on the appropriateness of instructional strategies when developing competence with specific reading skills among special needs groups should address itself. As Stauffer has stated in his discussion of the importance of the teacher's ro in providing organizational anchorage to a child's learning environment:

> Things and events tend to have a certain amount of coherence or organization. They have a harmony and a logic. It is the wise teacher who helps her pupils sense the harmony and grasp the logic of ideas. In teaching the organization of ideas and the organizing of ideas, it is the thinking of the student that is of chief concern. The teaching must be done in such a way that the student is caused to work at pulling the ideas together (p. 26 and p. 27; Stauffer, 1964).

To this end, further research on the appropriateness of student-centered instructional strategies, facilitating the development of critical reading abilities need be implemented and analyzed.

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